

2022

# Timber Supply for Batesville, Arkansas



University of Arkansas at  
Monticello  
College of Forestry,  
Agriculture, and Natural  
Resources

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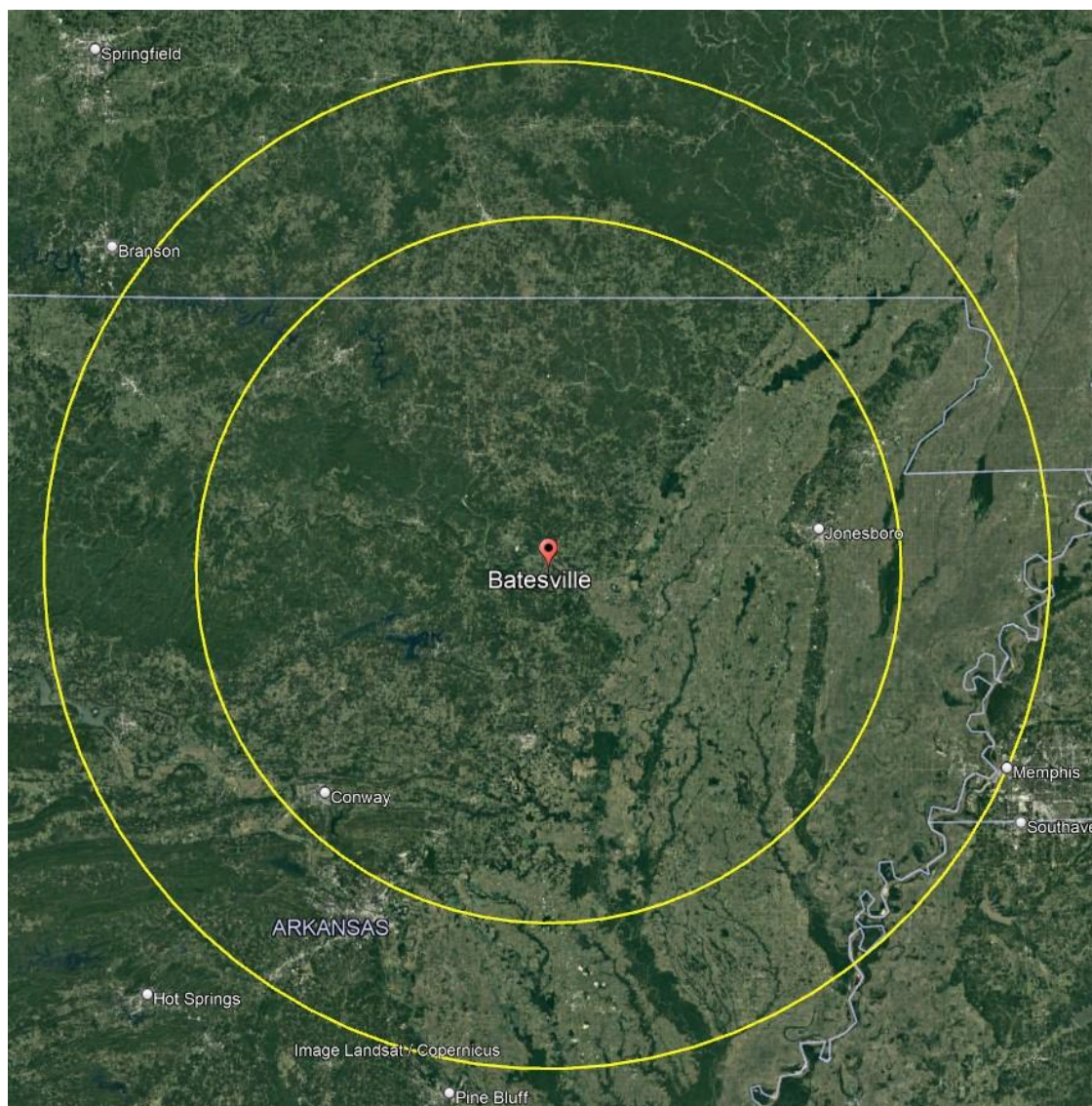
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or by contacting the Arkansas Center for Forest Business:

Dr. Matthew Pelkki [pelkki@uamont.edu](mailto:pelkki@uamont.edu) (870) 460-1949

Dr. Sagar Godar Chhetri [chhetri@uamont.edu](mailto:chhetri@uamont.edu) (870) 460-1294

The University of Arkansas at Monticello  
College of Forestry, Agriculture, and Natural Resources  
P.O. Box 3468  
Monticello, AR 71656-3468



*Figure 1. 70 and 100-mile radii around Batesville, Arkansas.*

## Summary

The timber resources in the 70-miles surrounding Batesville, Arkansas can support additional harvests greater than 0.7 million tons per year in pine saw logs and 22 thousand tons in pine pulpwood and top wood. Within 100 miles, these values increase to 1.3 and 7.7 million tons per year in saw logs and pulpwood/top wood, respectively. Annual hardwood surplus within 70 miles is 2.5 million tons of sawtimber and 0.7 million tons of pulpwood. When the supply area is increased to a 100-mile radius, the annual surplus in hardwood sawtimber is 5.2 million tons, but there is a DEFICIT of 5 million tons in pulpwood and topwood. The deficit in hardwood pulp and topwood is caused by the diameter increment on pulpwood class trees moving them into sawtimber. However, the total growth in hardwoods is only 4% higher than total removals, meaning that while the current hardwood sawtimber supply around Batesville is good, it cannot sustain a substantial increase in removals.

This data comes from the most recent FIA data (AR-2020, MO-2019, TN-2017, and MS-2019) and does not reflect changes in forest cover, growth, or removals from that time to present. Changes in existing mill production and other forest disturbances could have a substantial effect on the values provided here, and those changes will likely increase over time.

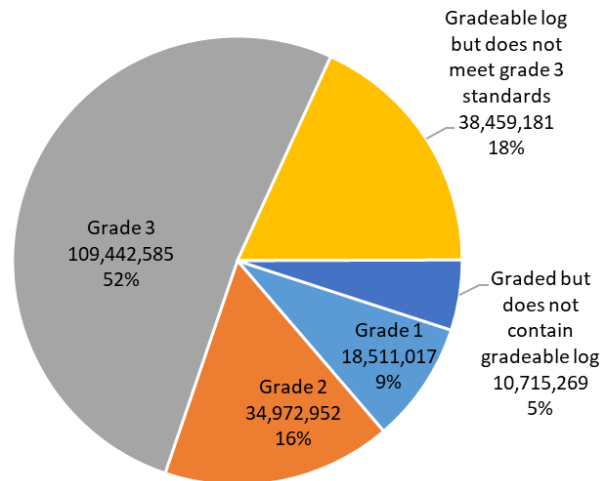
## Highlights of Tables

- There are 4.3 and 8.7 million acres of timber land within 70 and 100 miles, respectively, of Batesville, Arkansas
- Upland hardwood is the dominant forest type in the region (65%) followed by bottomland hardwood (14%) and Pine (10%)
- Naturally regenerated forests cover account for 94% of all forestland in the region, but 43% of pine forests are artificially regenerated. Only 2% of non-pine forests are artificially regenerated
- The site index of pine is higher in private (49.5) than public timber land (35).
- 80% of the timberland is privately owned. Forest growing stock, growth, and removals are generally proportional to ownership.
- Within 70 miles of Batesville
  - 30 million tons of pine growing stock, 22.4 million tons of which is pine saw timber and 7.6 million tons of pulpwood and top wood
  - 204.5 million tons of hardwood growing stock, 110.2 million tons of which is saw timber and 94.3 million tons is pulpwood and top wood
  - Annual surplus in pine growth is 0.7 million tons in saw timber and 22 thousand tons in pulpwood
  - Annual surplus in hardwood growth is 2.5 million tons in saw timber and 0.7 million tons in pulpwood
- Within 100 miles of Batesville
  - 66.7 million tons of pine growing stock, 51 million tons of which is pine saw timber and 15.7 million tons of pulpwood and top wood
  - 412.4 million tons of hardwood growing stock, 221.2 million tons of which is saw timber and 191.2 million tons is pulpwood and top wood
  - Annual surplus in pine growth is 1.3 million tons in saw timber and 7.7 million tons in pulpwood
  - Annual surplus in hardwood growth is 5.2 million tons in saw timber, but there is an annual deficit of 5 million tons in hardwood pulpwood and topwood.



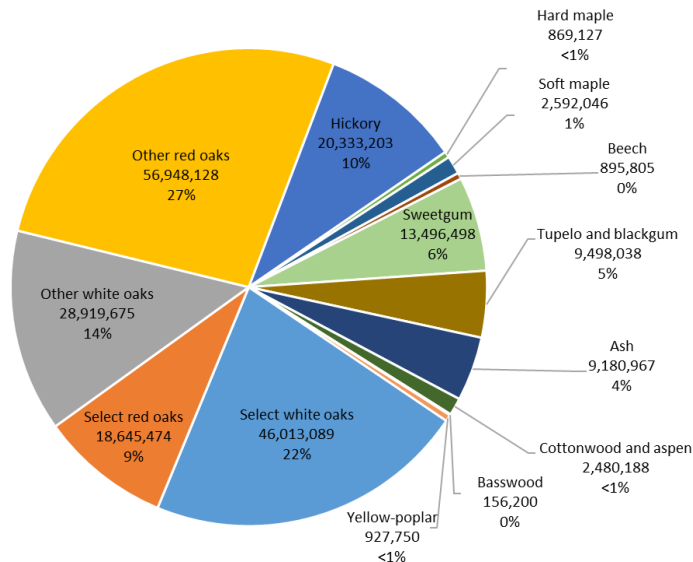
- Hardwood resources consist primarily of various oak species, beech, sweetgum, and tupelo/blackgum. 25% of the hardwood sawtimber would be considered high-grade trees suitable for factory grade lumber production.

Hardwood resources are plentiful in the region, but only 25% of the resources are considered “high quality” (Grades 1 and 2) which will produce substantial proportions of grade lumber (Figure 2). Grade 3 trees represent 52% of the sawtimber resource in the region and will produce some factory lumber but the majority of grade 3 and lower trees will largely produce crossties and pallet wood.



*Figure 2. Hardwood saw timber resources by tree trade within a 100-mile radius of Batesville, Arkansas. Volumes are saw timber in green short tons.*

The species groups present in the region are largely red and white oaks and sweetgum, which combined make up 78% of the total hardwood saw timber. Select red oak (9%) and select white oak (22%) are present as well. Select species are generally those preferred for factory grade lumber production.



*Figure 3. Major hardwood species groups present within a 100-mile radius of Batesville, Arkansas. Volume numbers are saw timber in green short tons.*

Many hardwood species present could sustain substantial increases in their sawtimber harvest levels. Most of this surplus is in oaks, hickory, and sweetgum. (Figure 4).

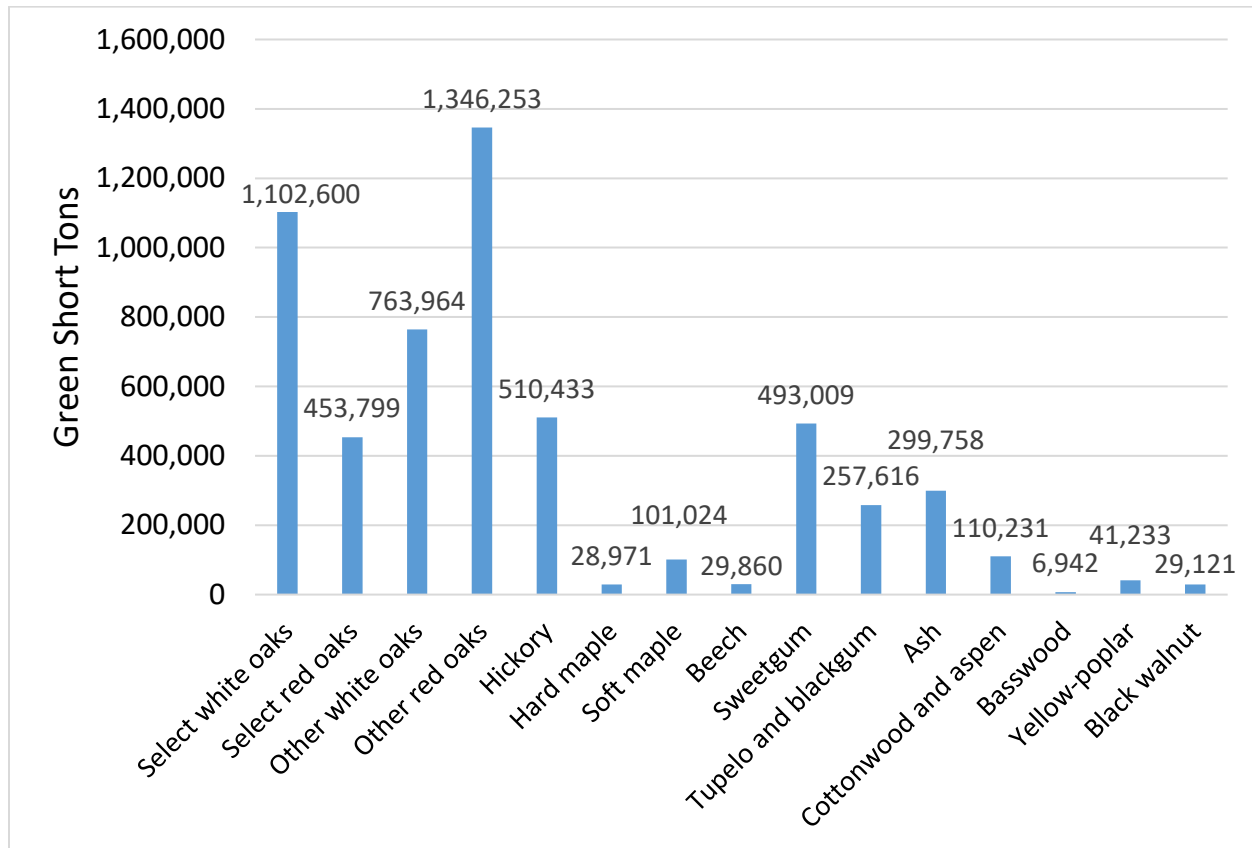


Figure 4. Sustainable annual allowable increase in saw timber harvesting in various species groups. Values are in saw timber green short tons per year within a 100-mile radius of Batesville, Arkansas.

## Purpose/Objectives

The purpose of this analysis is to create a one-time snapshot of merchantable timber around Batesville Arkansas. The data tables attached will provide information on the following:

- Timberland area within 70 and 100 miles aerial radius of Batesville, Arkansas by ownership and forest type group (Tables 1 and 2)
- Timberland area within 100 miles aerial radius of Batesville, Arkansas by forest type group and stand origin (Table 3)
- Within 70 miles and 100 miles for major species groups and ownership groups:
  - Current growing stock for merchantable bole, saw logs, and pulpwood/top wood (Table 4 and 8)
  - Annual net growth for merchantable bole, saw logs, and pulpwood/top wood (Table 5 and 9)
  - Annual removals group for merchantable bole, saw logs, and pulpwood/top wood (Table 6 and 10)
  - Annual net surplus for merchantable bole, saw logs, and pulpwood/top wood (Table 7 and 11)
- Hardwood saw timber growing stock by grade and estimates of sustainable surplus (or deficit) by species group (Table 12)

## Methods

The USDA Forest Service Forest Inventory and Analysis (FIA) database is the source of the data for these tables. Data comes from the Arkansas (2020), Missouri (2019), Tennessee (2017), and Mississippi (2019) inventories, which, at the time of this report are the most current available. The online software EVALIDATOR and DATIM processed the database queries for these reports. EVALIDATOR and DATIM can be accessed on the FIA National Program website (<https://www.fia.fs.fed.us/tools-data/>).

Some specifics to the database queries are important to note:

- The center of the analysis radii of 70 and 100 miles is 35.769799 degrees north latitude and - 91.640972 degrees west longitude (Batesville, Arkansas)
- The results show acre and tonnages based on timberland based on FIA definition (FIADEF)
- Ownership categories are either PUBLIC or PRIVATE
- Areas are in acres
- Tree biomass is reported in GREEN SHORT TONS

This report is an initial survey of timber resources. The Arkansas Center for Forest Business upon request can provide more detailed analysis and information regarding the region.

Table 1. Timberland acres by forest type group and ownership within a 70-mile radius of Batesville, Arkansas.

Forest type group	Total	Ownership group	
		Public	Private
Total	4,333,157	470,440	3,862,717
Loblolly / shortleaf pine group	357,363	47,197	310,166
Other eastern softwoods group	132,023	22,026	109,997
Pinyon / juniper group	10,907	0	10,907
Oak / pine group	351,111	28,283	322,828
Oak / hickory group	2,882,738	243,143	2,639,594
Oak / gum / cypress group	387,747	109,656	278,092
Elm / ash / cottonwood group	193,130	18,679	174,451
Other hardwoods group	11,300	1,456	9,845
Nonstocked	6,838	0	6,838

Table 2. Timberland acres by forest type group and ownership within a 100-mile radius of Batesville, Arkansas.

Forest type group	Total	Ownership group	
		Public	Private
Total	8,736,765	1,734,633	7,002,133
Loblolly / shortleaf pine group	854,811	205,435	649,376
Other eastern softwoods group	204,194	32,700	171,494
Pinyon / juniper group	14,355	-	14,355
Oak / pine group	681,344	139,780	541,564
Oak / hickory group	5,681,234	1,102,194	4,579,040
Oak / gum / cypress group	706,110	154,610	551,500
Elm / ash / cottonwood group	529,704	80,870	448,834
Maple / beech / birch group	1,762	-	1,762
Other hardwoods group	23,450	7,278	16,172
Exotic hardwoods group	243	-	243
Nonstocked	39,559	11,766	27,792

Table 3. Stand origin by acres and forest cover type within 100-mile radius of Batesville, Arkansas.

Forest type group	Total	Stand origin	
		Natural stands	Clear evidence of artificial regeneration
Total	8,616,496	8,106,683	509,813
Loblolly / shortleaf pine group	854,811	487,826	366,985
Other eastern softwoods group	204,194	204,194	0
Pinyon / juniper group	14,355	14,355	0
Oak / pine group	681,344	649,191	32,153
Oak / hickory group	5,662,780	5,652,660	10,121
Oak / gum / cypress group	699,950	627,666	72,284
Elm / ash / cottonwood group	436,903	408,632	28,271
Maple / beech / birch group	1,762	1,762	0
Other hardwoods group	23,450	23,450	0
Exotic hardwoods group	243	243	0



Table 4. Total timberland acres by site index and forest type group within 100-mile radius of Batesville, Arkansas

Forest type group	Total	Site index								Not available
		20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90+	
Total	8,736,765	35,163	109,842	532,071	1,568,301	2,050,769	918,481	361,310	82,092	3,078,735
Loblolly / shortleaf pine group	854,811	0	3,271	20,251	108,820	255,779	137,079	76,260	11,908	241,442
Other eastern softwoods group	204,194	17,619	16,962	17,823	8,615	17,281	5,981	1,500	0	118,412
Pinyon / juniper group	14,355	0	0	0	0	0	0	0	0	14,355
Oak / pine group	681,344	6,255	17,113	34,802	194,395	157,670	49,734	22,166	2,568	196,640
Oak / hickory group	5,681,234	11,289	71,714	451,310	1,222,818	1,556,509	623,336	152,026	35,792	1,556,440
Oak / gum / cypress group	706,110	0	0	1,558	2,646	24,746	61,526	79,946	24,186	511,503
Elm / ash / cottonwood group	529,704	0	781	0	19,954	31,171	33,701	28,052	5,998	410,047
Maple / beech / birch group	1,762	0	0	0	0	1,762	0	0	0	0
Other hardwoods group	23,450	0	0	6,327	7,278	0	3,348	0	0	6,496
Exotic hardwoods group	243	0	0	0	0	0	0	0	0	243
Nonstocked	39,559	0	0	0	3,775	5,850	3,775	1,361	1,640	23,157

Table 5. Public timberland acres by site index and forest type group within 100-mile radius of Batesville, Arkansas

Forest type group	Total	Site index								Not available
		20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90+	
Total	1,734,633	11,607	27,660	70,209	383,993	530,458	231,996	60,710	17,066	400,933
Loblolly / shortleaf pine group	205,435	0	0	4,407	38,148	86,695	40,786	4,082	0	31,316
Other eastern softwoods group	32,700	6,573	2,816	7,107	0	0	0	0	0	16,204
Pinyon / juniper group	0	0	0	0	0	0	0	0	0	0
Oak / pine group	139,780	0	8,294	8,553	55,527	35,269	8,252	8,148	2,568	13,168
Oak / hickory group	1,102,194	5,034	15,769	48,584	277,624	395,506	161,285	26,980	2,568	168,842
Oak / gum / cypress group	154,610	0	0	1,558	0	3,012	17,898	18,486	11,930	101,727
Elm / ash / cottonwood group	80,870	0	781	0	1,640	9,976	0	1,653	0	66,821
Maple / beech / birch group	0	0	0	0	0	0	0	0	0	0
Other hardwoods group	7,278	0	0	0	7,278	0	0	0	0	0
Exotic hardwoods group	0	0	0	0	0	0	0	0	0	0
Nonstocked	11,766	0	0	0	3,775	0	3,775	1,361	0	2,855

Table 6. Private timberland acres by site index and forest type group within 100-mile radius of Batesville, Arkansas

Forest type group	Total	Site index								Not available
		20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90+	
Total	7,002,133	23,556	82,182	461,861	1,184,308	1,520,311	686,485	300,601	65,026	2,677,802
Loblolly / shortleaf pine group	649,376	0	3,271	15,843	70,671	169,085	96,294	72,178	11,908	210,126
Other eastern softwoods group	171,494	11,046	14,146	10,716	8,615	17,281	5,981	1,500	0	102,209
Pinyon / juniper group	14,355	0	0	0	0	0	0	0	0	14,355
Oak / pine group	541,564	6,255	8,819	26,249	138,868	122,401	41,483	14,018	0	183,472
Oak / hickory group	4,579,040	6,255	55,945	402,726	945,194	1,161,002	462,051	125,045	33,224	1,387,598
Oak / gum / cypress group	551,500	0	0	0	2,646	21,734	43,627	61,460	12,256	409,776
Elm / ash / cottonwood group	448,834	0	0	0	18,314	21,195	33,701	26,400	5,998	343,226
Maple / beech / birch group	1,762	0	0	0	0	1,762	0	0	0	0
Other hardwoods group	16,172	0	0	6,327	0	0	3,348	0	0	6,496
Exotic hardwoods group	243	0	0	0	0	0	0	0	0	243
Nonstocked	27,792	0	0	0	0	5,850	0	0	1,640	20,302

Table 7. Growing stock of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Batesville, Arkansas.

TOTAL MERCHANTABLE BOLE GROWING STOCK IN TONS				
Species group	Total	Ownership group		Not available
		Public	Private	
Total	245,641,608	39,775,498	205,866,110	0
Pines	29,962,779	4,572,319	25,390,460	0
Other softwoods	11,149,176	3,186,903	7,962,273	0
Soft hardwoods	36,329,079	8,172,523	28,156,556	0
Hard hardwoods	168,200,574	23,843,753	144,356,821	0

SAWLOG PORTION OF GROWING STOCK IN TONS				
Species group	Total	Ownership group		Not available
		Public	Private	
Total	139,108,736	28,261,614	110,847,123	0
Pines	22,351,540	3,680,028	18,671,513	0
Other softwoods	6,525,863	2,536,846	3,989,017	0
Soft hardwoods	18,604,458	5,294,215	13,310,244	0
Hard hardwoods	91,626,874	16,750,525	74,876,349	0

PULPWOOD and TOPWOOD PORTION OF GROWING STOCK IN TONS				
Species group	Total	Ownership group		Not available
		Public	Private	
Total	106,532,872	11,513,884	95,018,987	0
Pines	7,611,239	892,291	6,718,947	0
Other softwoods	4,623,313	650,057	3,973,256	0
Soft hardwoods	17,724,621	2,878,308	14,846,312	0
Hard hardwoods	76,573,700	7,093,228	69,480,472	0

Table 8. Annual net growth of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Batesville, Arkansas.

MERCHANTABLE BOLE BIOMASS NET ANNUAL GROWTH IN TONS				
Species group	Total	Ownership group		
		Public	Private	Not available
Total	7,287,067	834,738	6,431,452	20,877
Pines	1,571,388	208,100	1,344,089	19,199
Other softwoods	419,076	95,194	322,578	1,303
Soft hardwoods	1,049,467	123,878	923,707	1,882
Hard hardwoods	4,247,136	407,565	3,841,079	-1,508

SAWLOG PORTION OF NET ANNUAL GROWTH IN TONS				
Species group	Total	Ownership group		
		Public	Private	Not available
Total	5,300,321	741,153	4,534,090	25,078
Pines	1,304,212	207,067	1,076,718	20,427
Other softwoods	255,179	83,070	171,583	525
Soft hardwoods	647,416	93,730	553,027	658
Hard hardwoods	3,093,515	357,286	2,732,761	3,469

PULPWOOD and TOPWOOD PORTION OF NET ANNUAL GROWTH IN TONS				
Species group	Total	Ownership group		
		Public	Private	Not available
Total	1,986,746	93,585	1,897,362	-4,201
Pines	267,176	1,034	267,370	-1,228
Other softwoods	163,897	12,124	150,995	778
Soft hardwoods	402,052	30,147	370,679	1,225
Hard hardwoods	1,153,621	50,279	1,108,318	-4,976

Table 9. Annual removals of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Batesville, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL REMOVALS IN TONS

Species group	Total	Ownership group		
		Public	Private	Not available
Total	2,934,457	557,580	1,600,387	776,490
Pines	816,704	65,745	614,662	136,297
Other softwoods	72,413	642	11,194	60,576
Soft hardwoods	511,107	373,309	79,100	58,698
Hard hardwoods	1,534,233	117,884	895,431	520,918

SAWLOG PORTION OF ANNUAL REMOVALS IN TONS

Species group	Total	Ownership group		
		Public	Private	Not available
Total	1,827,489	344,103	993,465	489,921
Pines	571,855	52,649	418,819	100,387
Other softwoods	45,502	0	3,165	42,337
Soft hardwoods	267,812	207,523	35,143	25,146
Hard hardwoods	942,320	83,930	536,338	322,051

PULPWOOD and TOPWOOD PORTION OF ANNUAL REMOVALS IN TONS

Species group	Total	Ownership group		
		Public	Private	Not available
Total	1,106,968	213,477	606,922	286,569
Pines	244,849	13,095	195,843	35,911
Other softwoods	26,911	642	8,029	18,240
Soft hardwoods	243,295	165,785	43,957	33,552
Hard hardwoods	591,913	33,954	359,093	198,867



Table 10. Annual surplus of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Batesville, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL NET SURPLUS IN TONS

Species group	Total	Ownership group		
		Public	Private	Not available
Total	4,352,610	277,158	4,831,065	-755,613
Pines	754,684	142,356	729,427	-117,098
Other softwoods	346,663	94,552	311,384	-59,273
Soft hardwoods	538,360	-249,431	844,607	-56,816
Hard hardwoods	2,712,903	289,681	2,945,648	-522,425

SAWLOG PORTION OF ANNUAL NET SURPLUS IN TONS

Species group	Total	Ownership group		
		Public	Private	Not available
Total	3,472,833	397,051	3,540,625	-464,842
Pines	732,357	154,417	657,899	-79,960
Other softwoods	209,677	83,070	168,418	-41,812
Soft hardwoods	379,603	-113,793	517,884	-24,488
Hard hardwoods	2,151,196	273,355	2,196,423	-318,582

PULPWOOD and TOPWOOD PORTION OF ANNUAL NET SURPLUS IN TONS

Species group	Total	Ownership group		
		Public	Private	Not available
Total	879,778	-119,892	1,290,440	-290,771
Pines	22,327	-12,062	71,527	-37,138
Other softwoods	136,986	11,482	142,966	-17,462
Soft hardwoods	158,757	-135,638	326,722	-32,328
Hard hardwoods	561,708	16,326	749,225	-203,843

Table 11. Growing stock of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Batesville, Arkansas.

TOTAL MERCHANTABLE BOLE GROWING STOCK IN TONS				
Species Group	Total	Ownership group		Not available
		Public	Private	
Total	495,920,854	123,908,710	372,012,144	0
Pines	66,688,249	22,308,880	44,379,369	0
Other softwoods	16,821,450	4,836,395	11,985,055	0
Soft hardwoods	76,380,866	17,960,288	58,420,578	0
Hard hardwoods	336,030,288	78,803,146	257,227,142	0

SAWLOG PORTION OF GROWING STOCK IN TONS				
Species Group	Total	Ownership group		Not available
		Public	Private	
Total	281,646,580	81,148,055	200,498,525	0
Pines	51,007,452	18,305,492	32,701,961	0
Other softwoods	9,420,249	3,626,868	5,793,381	0
Soft hardwoods	40,086,213	10,874,954	29,211,259	0
Hard hardwoods	181,132,666	48,340,741	132,791,924	0

PULPWOOD and TOPWOOD PORTION OF GROWING STOCK IN TONS				
Species Group	Total	Ownership group		Not available
		Public	Private	
Total	214,274,274	42,760,655	171,513,619	0
Pines	15,680,797	4,003,388	11,677,408	0
Other softwoods	7,401,201	1,209,527	6,191,674	0
Soft hardwoods	36,294,653	7,085,334	29,209,319	0
Hard hardwoods	154,897,622	30,462,405	124,435,218	0

Table 12. Annual net growth of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Batesville, Arkansas.

MERCHANTABLE BOLE BIOMASS NET ANNUAL GROWTH IN TONS				
Species Group	Total	Ownership group		
		Public	Private	Not available
Total	17,315,813	3,367,444	13,884,135	64,234
Pines	10,807,351	2,052,295	8,722,228	32,828
Other softwoods	3,218,421	733,366	2,449,737	35,317
Soft hardwoods	733,556	148,798	583,035	1,722
Hard hardwoods	2,556,486	432,985	2,129,135	-5,634

SAWLOG PORTION OF NET ANNUAL GROWTH IN TONS				
Species Group	Total	Ownership group		
		Public	Private	Not available
Total	9,952,195	2,196,946	7,720,880	34,368
Pines	2,579,619	667,866	1,878,612	33,142
Other softwoods	346,120	100,910	244,684	527
Soft hardwoods	1,380,400	279,977	1,103,580	-3,157
Hard hardwoods	5,646,055	1,148,193	4,494,005	3,857

PULPWOOD and TOPWOOD PORTION OF NET ANNUAL GROWTH IN TONS				
Species Group	Total	Ownership group		
		Public	Private	Not available
Total	7,363,618	1,170,498	6,163,254	29,866
Pines	8,227,731	1,384,429	6,843,616	-314
Other softwoods	2,872,300	632,457	2,205,053	34,790
Soft hardwoods	-646,844	-131,179	-520,545	4,880
Hard hardwoods	-3,089,569	-715,209	-2,364,870	-9,490

Table 13. Annual removals of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Batesville, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL REMOVALS IN TONS

Species Group	Total	Ownership group		
		Public	Private	Not available
Total	5,046,364	758,274	3,321,626	966,465
Pines	1,795,874	188,855	1,324,140	282,879
Other softwoods	83,462	2,337	18,339	62,785
Soft hardwoods	661,771	367,698	231,985	62,089
Hard hardwoods	2,505,258	199,383	1,747,162	558,713

SAWLOG PORTION OF ANNUAL REMOVALS IN TONS

Species Group	Total	Ownership group		
		Public	Private	Not available
Total	3,215,786	474,950	2,108,209	632,626
Pines	1,301,263	156,989	911,751	232,523
Other softwoods	45,644	0	3,175	42,470
Soft hardwoods	339,157	199,003	114,879	25,275
Hard hardwoods	1,529,721	118,959	1,078,404	332,358

PULPWOOD and TOPWOOD PORTION OF ANNUAL REMOVALS IN TONS

Species Group	Total	Ownership group		
		Public	Private	Not available
Total	1,830,579	283,323	1,213,417	333,839
Pines	494,611	31,866	412,389	50,355
Other softwoods	37,818	2,337	15,165	20,316
Soft hardwoods	322,614	168,695	117,106	36,813
Hard hardwoods	975,536	80,425	668,757	226,354

Table 14. Annual surplus of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Batesville, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL NET SURPLUS IN TONS				
Species Group	Total	Ownership group		
		Public	Private	Not available
Total	12,269,448	2,609,170	10,562,509	-902,231
Pines	9,011,477	1,863,440	7,398,088	-250,051
Other softwoods	3,134,959	731,029	2,431,398	-27,468
Soft hardwoods	71,785	-218,899	351,051	-60,366
Hard hardwoods	51,228	233,601	381,973	-564,346

SAWLOG PORTION OF ANNUAL NET SURPLUS IN TONS				
Species Group	Total	Ownership group		
		Public	Private	Not available
Total	6,736,409	1,721,996	5,612,671	-598,258
Pines	1,278,356	510,877	966,861	-199,382
Other softwoods	300,476	100,910	241,509	-41,943
Soft hardwoods	1,041,243	80,974	988,702	-28,433
Hard hardwoods	4,116,334	1,029,234	3,415,600	-328,501

PULPWOOD and TOPWOOD PORTION OF ANNUAL NET SURPLUS IN TONS				
Species Group	Total	Ownership group		
		Public	Private	Not available
Total	5,533,039	887,174	4,949,838	-303,973
Pines	7,733,121	1,352,562	6,431,227	-50,669
Other softwoods	2,834,483	630,119	2,189,889	14,475
Soft hardwoods	-969,459	-299,874	-637,651	-31,934
Hard hardwoods	-4,065,106	-795,633	-3,033,627	-235,845

Table 15. Hardwood saw timber growing stock and sustainable harvest increase in green tons of saw log portion of growing stock on timberland within 70 miles of Batesville, Arkansas.

Species group	Growing Stock Volume in green short tons					Gradeable log but does not meet grade 3 standards	Graded but does not contain gradeable log	Annual Sustainable Harvest Increase
	Total	Grade 1	Grade 2	Grade 3				
Total	212,101,003	18,511,017	34,972,952	109,442,585		38,459,181	10,715,269	6,115,887
Select white oaks	46,013,089	3,554,021	8,848,991	24,747,374		6,271,214	2,591,488	1,102,600
Select red oaks	18,645,474	2,028,346	4,577,917	8,143,746		3,191,285	704,181	453,799
Other white oaks	28,919,675	972,702	4,863,879	15,728,687		6,121,412	1,232,996	763,964
Other red oaks	56,948,128	5,155,595	6,582,621	26,481,587		15,487,972	3,240,353	1,346,253
Hickory	20,333,203	889,150	3,347,131	12,432,433		3,140,715	523,775	510,433
Hard maple	869,127	0	0	504,521		364,607	0	28,971
Soft maple	2,592,046	200,709	63,407	1,222,214		807,686	298,031	101,024
Beech	895,805	0	380,654	373,157		87,846	54,147	29,860
Sweetgum	13,496,498	1,222,107	2,741,966	7,466,910		931,927	1,133,587	493,009
Tupelo and blackgum	9,498,038	1,444,298	1,994,753	5,151,152		443,589	464,246	257,616
Ash	9,180,967	2,037,636	916,391	4,953,097		829,162	444,682	299,758
Cottonwood and aspen	2,480,188	683,912	151,881	1,383,533		260,861	0	110,231
Basswood	156,200	0	78,654	77,546		0	0	6,942
Yellow-poplar	927,750	261,243	149,192	37,345		479,970	0	41,233
Black walnut	1,144,815	61,299	275,516	739,283		40,935	27,782	29,121
Other eastern soft hardwoods	11,536,787	421,496	2,107,249	5,375,942		2,815,803	816,297	511,095
Other eastern hard hardwoods	899,372	0	109,475	594,390		195,508	0	29,979



## GLOSSARY OF TERMS

**Average annual net growth of growing stock:** The annual change in volume of sound wood in live sawtimber and poletimber trees, and the total volume of trees entering these classes through ingrowth, less volume losses resulting from natural causes, over the last 5 years of inventory. Annual net growth is annual gross growth – annual mortality.

**Average annual removals from growing stock:** The average net growing-stock volume in growing-stock trees removed annually for roundwood forest products and the volume of removals for other purposes (i.e. land conversion).

**Annual net surplus:** The difference between average annual net growth and average annual net removals.

**Forest type:** A classification of forestland based upon and named for the tree species that forms the plurality of live-tree stocking. A forest type classification for a field location indicates the predominant live-tree species cover for the field location; hardwoods and softwoods are the first group to be determine predominant group, and Forest Type is selected from the predominant group.

**Forest type group:** A combination of forest types that share closely associated species or site requirements.

**Growing stock tree:** All live trees 5.0 inches (12.7) cm) DBH or larger that meet (now or prospectively) regional merchantability requirements in terms of saw-log length, grade, and cull deductions. Excludes rough and rotten cull trees.

**Log grade:** A log classification based on external characteristics as indicators of quality or value. Also see Tree grade. (See USDA, 2003 on tree grading field techniques.)

**Merchantable:** Refers to a pulpwood or sawlog section that meets pulpwood or sawlog specifications, respectively.

**Net annual growth:** The average annual net increase in the volume of trees during the period between inventories. Components include the increment in net volume of trees at the beginning of the specific year surviving to its end, plus the net volume of trees reaching the minimum size class during the year, minus the volume of trees that died during the year, and minus the net volume of trees that became cull trees during the year.

**Net volume in cubic feet:** The gross volume in cubic feet less deductions for rot, roughness, and poor form. Volume is computed for the central stem from a 1-foot stump to a minimum 4.0-inch top diameter outside bark, or to the point where the central stem breaks into limbs.

**Nonstocked:** Forestland stocked with less than 10 percent of full stocking with all live trees. Examples are recently cutover areas or recently reverted agricultural fields.

**Other red oaks:** A group of species in the genus *Quercus* that includes scarlet oak, northern pin oak, southern red oak, bear oak, shingle oak, laurel oak, blackjack oak, water oak, pin oak, willow oak, and black oak.

**Other white oaks:** A group of species in the genus *Quercus* that includes overcup oak, chestnut oak, and post oak.

**Other softwoods:** softwood species other than pines. Will include redcedar, bald cypress, and cypress

**Pulpwood:** Roundwood, whole-tree chips, or wood residues used for the production of wood pulp.

**Saw log:** A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods, or meeting other combinations of size and defect specified by regional standards.

**Sawtimber tree:** A live tree of commercial species containing at least a 12-foot sawlog or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h. Hardwoods must be at least 11.0 inches diameter outside bark (d.o.b.).

**Select red oaks:** A group of species in the genus *Quercus* that includes cherrybark oak, northern red oak, and Shumard oak.

**Select white oaks:** A group of species in the genus *Quercus* that includes white oak, swamp white oak, bur oak, swamp chestnut oak, and chinkapin oak.

**Timberland:** Forestland that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. (Note: Areas qualifying as timberland are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included.)

**Tons:** Tons expressed in this report are short tons (2000 pounds) and are expressed in green weight. Tons in this report are calculated from net volume in cubic feet, which excludes bark.

**Topwood:** Merchantable pulpwood that is found above the sawlog portion of sawtimber trees.

Adapted from Forest Inventory and Analysis Glossary of Terms. Last accessed July 3, 2021.

<https://www.nrs.fs.fed.us/fia/data-tools/state-reports/glossary/>

